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## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of

M. SAITO et al

Serial No. 09/930,146

Group Art Unit: 2878

Filed: August 16, 2001

Examiner: HANNAHER, CONSTANTINE

For: A METHOD OF MEASURING PHOSPHORESCENCE  
OR FLUORESCENCEDECLARATION OF INVENTOR UNDER 37 CFR § 1.123

I, Michihiro Saito, of Kashiwa, Japan, hereby declare as follows:

1. I am one of the inventors of the above identified application.
2. Attached is a sheet of drawings in which Figs. 1 and 2 illustrate an apparatus constructed according to the invention of the above-identified application. The apparatus was used to conduct a test in which I participated. Fig. 3 is a graph illustrating the results of the test.
3. Fig. 1 on the attached sheet is a schematic sectional view of a sample holder according to the present invention which comprises a slide glass plate made of polystyrene on which a mask made of carbon is placed and Fig. 2 is a perspective view of the carbon mask. The polystyrene slide

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glass plate is 1 mm in thickness and has a through-hole of 1.2 mm in diameter. The carbon mask is cylindrical and has a length of 4 mm, an outside diameter of 6 mm and an inside diameter of 4 mm. The carbon mask has a bottom plate of 1 mm in thickness which has a light beam passing hole aligned with the through-hole. An irradiation light beam was passed through the light beam passing hole of the carbon mask and then through the through-hole of the polystyrene sample holder.

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4. Fig. 3 on the attached sheet is a graph showing the results of a test conducted using the apparatus of Figs. 1 and 2. The graph shows intensities of background noise signals actually measured with the diameter of the through-hole set to 0.53 mm, 0.77 mm, 1.05 mm and 1.5 mm. The measurement was performed by using a nitrogen gas laser in order to generate the irradiation light beam and using a time-resolved photometer in order to detect the irradiation light beam passed through the light beam passing hole and the through hole. In the graph of Fig. 3, the background noise signals are based on light scattered from the sample holder and therefore they are peculiar to or characteristic of the polystyrene material of which the sample holder is made.

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5. It is apparent from the graph of Fig. 3 that the intensity of background noise signal is remarkably decreased as the diameter of the through-hole becomes smaller. In view of this fact, the advantageous effects of the invention of the above-identified application are remarkable.

I declare that the all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of this application and any registration resulting therefrom.

September 17, 2003  
Date

Michihiro Saifu  
Michihiro Saifu